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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,083	08/25/2006	Joachim Lohr	L7725.06104	7774
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EXAMINER DOAN, PHUOC HUU				
ART UNIT 2617		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/568,083

Applicant(s)

LOHR ET AL.

Examiner

PHUOC H. DOAN

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/86)
Paper No(s)/Mail Date 04/07/06; 02/13/06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (US Pub No: 2003/0031119) in view of Sagfors (US Pub No: 2005/0002412).

As to claim 1, Kim discloses a data transmission method for use in a mobile communication system comprising a communication terminal and a plurality of base stations (page 2, paragraph [0016]), the communication terminal being in communication with said plurality of base stations during a soft handover (page 2, par. [0016] “FCS is a technique assuming characteristics between a soft handover and a hard handover that occur in conventional mobile communication systems”), the method comprising the steps of: receiving a data packet from the communication terminal at the plurality of base stations (page 2, par [0016] “UE receives signals with strengths at or above an acceptable level from cell or base station”), checking data integrity of the received data packet at each of the base stations (page 2, par [0020]), storing the received data packet in a buffer of the

respective base station (page 2, par [0017] “the Node Bs store the data in buffers for the case of being the best cell”), and if data integrity of the received data packet was acknowledged by a base station, transmitting control information from the respective base station to at least one other base station of said plurality of base stations (page 2, par [0018-0019] “the UE can receive downlink transmission on a plurality of radio link”), wherein the control information indicates that the data integrity of the received data packet was acknowledged (page 2, par [0021] “the ACK received from the UE”). However, Kim does not disclose if data integrity of the received data packet was not acknowledged by a base station.

In the same field of endeavor, Sagfors discloses if data integrity of the received data packet was not acknowledged by a base station (page 1, par [0021] “retransmission timer times out without a packet being acknowledged during the retransmission time of the packet”). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide if data integrity of the received data packet was not acknowledged by a base station as taught by Sagfors to the system of Kim in order to reduce the packet delay.

As to claim 2, Kim further discloses the method according to claim 1, further comprising the step of: in response to receiving said control information at said at

least one other base station (page 2, par [0019]), flushing the buffer at each base station that did not acknowledge data integrity of the received data packet (page 2, par [0017]).

As to claim 3, Kim further discloses the method according to claim 1, further comprising the step of: transmitting a feedback message from one of said plurality of base stations to the communication terminal indicating whether at least one of said plurality of base stations acknowledged data integrity of the received data packet (page 2, par [0022]).

As to claim 4, the combination of Kim and Sagfors disclose the method according to claim 1, further comprising the step of: if a base station did not acknowledge data integrity of the received data packet (page 2, par. [0022] of Kim), transmitting control information from said base station to at least one the other base stations of the plurality of base stations (page 2, par [0019] of Kim), wherein the control information indicates that the data integrity of the received data packet was not acknowledged (page 1, par [0021] of Sagfors).

As to claim 5, Kim further discloses the method according to claim 3, wherein said

one base station transmitting the feedback message to the communication terminal determines whether at least one of said plurality of base stations acknowledged data integrity of the received data packet by evaluating the control information received from said other base stations prior to transmitting the feedback message to the communication terminal (page 5, par [0068]).

As to claim 6, Kim further discloses the method according to claim 1, wherein said control information is transmitted from a transmitting base station via a control unit to a destination base station (page 5, par [0065]).

As to claim 7, Kim further discloses the method according to claim 3, further comprising the step of selecting said one base station for transmitting said feedback message to the communication terminal by a control unit connected to each base station of said plurality of base stations (page 5, par [0068] "selection the best cell based on the HS-DSCH has error or not (ACK/NACK)").

As to claim 8, Kim further discloses the method according to claim 7, wherein said control unit evaluates downlink channel quality information indicating the downlink channel qualities between the communication terminal and each base

station of the plurality of base stations, and selects said one base station for transmitting the feedback message to the communication terminal based on the evaluation result (page 5, par [0068]).

As to claim 9, Kim further discloses the method according to claim 3, further comprising the steps of: each base station of said plurality of base stations determining downlink channel quality information indicating the downlink channel quality between the communication terminal and the respective base station (page 5, par [0070]), each base station of said plurality of base stations transmitting said determined downlink channel quality information to the other base stations of said plurality of base stations (page 5, par [0070]), each base station of said plurality of base stations receiving the transmitted downlink channel quality information from the other base stations of said plurality of base stations (page 5, par [0070]), each base station of said plurality of base stations evaluating the downlink channel quality information received from said other base stations and the downlink channel quality information determined by itself to determine the best downlink channel quality characteristic (page 5, par [0068-0069] “where is the best cell is changed and select”), and the base station having the best downlink channel quality characteristic transmitting said feedback message to the communication terminal

(page 5, par [0068-0069]).

As to claim 10, Kim further disclose the method according to claim 3, further comprising the step of: if said one base station transmitting said feedback message to the communication terminal determines that another base station has the best downlink channel quality characteristic (page 5, par [0068]), transmitting a selection message from said one base station to said other base station assigning to said other base station the task of transmitting a feedback message to the communication terminal for future data integrity acknowledgement (page 5, par [0068], [0070]).

As to claim 11, Kim further discloses the method according to claim 10, wherein the determination of said base station having the best downlink channel quality characteristic comprises the steps of: each base station of said plurality of base stations determining downlink channel quality information indicating the downlink channel quality between the communication terminal and the respective base station (page 5, par [0070]), each base station of said plurality of base stations except the base station transmitting the feedback message to the communication terminal, transmitting said determined downlink channel quality information to

said base station transmitting said feedback message (page 5, par [0070]), said one base station transmitting said feedback message receiving the transmitted downlink channel quality information from the other base stations of said plurality of base stations (page 5, par [0070]), and evaluating the downlink channel quality information received from said other base stations and the downlink channel quality information determined by itself to determine the best downlink channel quality characteristic (page 5, par [0070], page 6, par [0079]).

As to claim 12, Kim further discloses the method according to claim 8, wherein the evaluation of the downlink channel quality information comprises the step of averaging parameters in the downlink channel quality information (page 5, par [0070]), wherein the selection is based on the averaged downlink channel quality (page 5, par [0068], [0070]).

As to claim 13, Kim further discloses the method according to claim 1, further comprising the step of: forwarding the received data packet to a control unit in the mobile communication system by at least one of the base stations that did acknowledge data integrity of the received data packet (page 5, par [9968]).

As to claim 14, Kim further discloses the method according to claim 1, wherein the data packet is received via a dedicated channel (page 3, par [0024]).

As to claim 15, the combination of Kim and Sagfors further disclose a data packet retransmission method in a mobile communication system comprising a communication terminal and a plurality of base stations (page 5, par [0062] of Kim), the communication terminal being in communication with said plurality of base stations during a soft handover (page 4, par [0061] of Kim), wherein each base station of said plurality of base stations comprises means for controlling and enabling data packet retransmissions between the respective base station and said communication terminal in accordance with a packet retransmission scheme (page 5, par [0062] of Kim), and wherein said means comprises a buffer for storing data packets received at the respective base station for which data integrity was not acknowledged (page 1, par [0021] of Sagfors), wherein the buffer is updated using the method according to claim 1 (page 1, par [0021], page 5, par 4 [0075] of Sagfors).

As to claim 16, Kim further discloses the method according to claim 15, wherein the retransmission scheme is a window based packet retransmission scheme using

a receiver window to control packet retransmissions (page 1, par [0012]) , and the control information exchanged among the base stations comprises a pointer pointing to the upper edge or lower edge of the receiver window (page 6 par [0079-0080] “a pointer pointing to the receiver window based on the cell ID that provided by indicating the type of a control frame in combined with header or MAC”).

As to claim 17, Kim further discloses the method according to claim 15, wherein the retransmission scheme is a stop-and-wait packet retransmission scheme with at least one retransmission process (page 5, par [0062]), and the control information exchanged among the base stations comprises a process number identifying a data packet retransmission process (page 5, par [0062]), and an indicator for indicating whether the data packet's integrity can be acknowledged (page 5, par [0068]).

As to claim 18, Kim further discloses the method according to claim 17, wherein the control information exchanged among the base stations further comprises a sequence number or data indicator identifying the received data packet at the receiving base station (page 6, par [0080]).

As to claim 19, Kim further discloses the method according to claim 15, wherein

the control information exchanged among the base stations comprises an identifier identifying the communication terminal (page 6, par [0079]).

As to claim 20, Kim further discloses a base station in a mobile communication system comprising a communication terminal and a plurality of base stations (page 5 par [0065]), wherein the communication terminal is in communication with said plurality of base stations during a soft handover (page 4, par [0061]), and wherein said base station comprises means for implementing the method according to claim 1 (page 5, par [0062]).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUOC H. DOAN whose telephone number is 571-272-7920. The examiner can normally be reached on 9:30 AM - 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, VINCENT HARPER can be reached on 571-272-7605. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/VINCENT P. HARPER/
Supervisory Patent Examiner, Art Unit 2617

/PHUOC DOAN/
05/10/08